



## **DR. MICHAEL RUBINO**

### **Manager of NOAA's Aquaculture Program**

Dr. Michael Rubino is the manager of the National Oceanic and Atmospheric Administration's Aquaculture Program. He joined NOAA in late 2004 to lead NOAA's renewed commitment to marine aquaculture. Most recently, Dr. Rubino managed New Funds Development for the World Bank's Carbon Finance Group. In the 1990s, Dr. Rubino was at the International Finance Corporation, a private sector affiliate of the World Bank, where he developed renewable energy and biodiversity investment funds. Earlier he was the CEO of Bluewaters, Inc., an aquaculture production and R&D company and a partner in Palmetto Aquaculture, a shrimp farm in South Carolina. Dr. Rubino has served as vice-chairman of the State of Maryland's Aquaculture Advisory Committee and holds a Ph.D. in Natural Resources from the University of Michigan.



## **VICE ADMIRAL CONRAD LAUTENBACHER USN (Ret.)**

Retired Navy Vice Admiral Conrad C. Lautenbacher, Ph.D., serves as the undersecretary of commerce for oceans and atmosphere. He was appointed Dec. 19, 2001. Along with this title comes the added distinction of serving as the eighth administrator of the National Oceanic and Atmospheric Administration (NOAA). He holds an M.S. and Ph.D. from Harvard University in applied mathematics. Lautenbacher oversees the day-to-day functions of NOAA, as well as laying out its strategic and operational future. The agency manages an annual budget of \$4 billion. The agency includes, and is comprised of, the National Environmental Satellite, Data and Information Services; National Marine Fisheries Service; National Ocean Service; National Weather Service; Oceanic and Atmospheric Research; Marine and Aviation Operations; and the NOAA Corps, the nation's seventh uniformed service. He directed an extensive review and reorganization of the NOAA corporate structure to meet the environmental challenges of the 21st century.



## **DR. BILL HOGARTH**

### **Director of NOAA Fisheries**

Dr. Hogarth is the Assistant Administrator for Fisheries at the National Marine Fisheries Service, National Oceanic and Atmospheric Administration (NOAA Fisheries). As Assistant Administrator, he is responsible for overseeing the management and conservation of marine fisheries and the protection of marine mammals, sea turtles, and coastal fisheries and their habitats within the United States Exclusive Economic Zone. Dr. Hogarth's background and experience has focused on a wide range of environmental, scientific, and marine policy issues. He has held a number of leadership roles for NOAA Fisheries, including Acting Assistant Administrator (February to September 2001) and Deputy Assistant Administrator for Fisheries (July 2000 to February 2001). He also served as the Southeast Regional Administrator in St. Petersburg, Florida, from May 1999 to July 2000 and as the Southwest Regional Administrator in Long Beach, California, from April 1997 to April 1999. From 1994 to 1997, he held several positions at NOAA Fisheries headquarters, as the Chief of the Highly Migratory Species Division and as senior staff for recreational fisheries issues. Prior to joining NOAA, Dr. Hogarth was the Director of the North Carolina Division of Marine Fisheries, a position he held from 1986 to 1994. He holds a Ph.D. from North Carolina State University and M.S. and B.S. degrees from the University of Richmond.



## **DR. PAUL SANDIFER**

### **Member of the U.S. Commission on Ocean Policy**

Dr. Paul Sandifer is the Senior Scientist for the National Oceanic and Atmospheric Administration's National Centers for Coastal Ocean Science (NCCOS), and Chief Scientist for NOAA's Oceans and Human Health Initiative. He is located at the Hollings Marine Laboratory in Charleston, South Carolina. Before coming to NOAA, Dr. Sandifer was named by President George W. Bush to the U.S. Commission on Ocean Policy while serving as the director of the South Carolina Department of Natural Resources (SCDNR). Following his start at SCDNR in 1972, Dr. Sandifer held various posts, including assistant, associate and senior marine scientist, and assistant director of the Marine Resources Research Institute. In 1984, he was named Director of the Marine Resources Division, and in 1997 was tapped to serve as Director of the agency where he served under three governors. While at the Marine Resources Division, he was responsible for developing the agency's internationally recognized aquaculture research and development program and establishing the Waddell Mariculture Research and Development Center. Dr. Sandifer is a past president and honorary life member of the World Aquaculture Society, a fellow of the American Association for the Advancement of Science, and recipient of the Order of the Palmetto, South Carolina's highest civilian honor. He has authored and co-authored more than 130 scientific and technical publications in the fields of marine biology, aquaculture, coastal ecology and policy.



**DR. RICHARD LANGAN**  
**Director of the Cooperative Institute for New England**  
**Mariculture and Fisheries and the co-director of the**  
**Cooperative Institute for Coastal and Estuarine**  
**Environmental Technology**

Dr. Richard Langan is director of the Cooperative Institute for New England Mariculture and Fisheries (CINEMAR), which seeks to restore and preserve New England's fisheries through research that explores open ocean aquaculture, ecosystem-based management, and stock enhancement. Dr. Langan is also co-director of the Cooperative Institute for Coastal and Estuarine Environmental Technology (CICEET), which develops tools for clean water and healthy coastal habitats. He is an adjunct professor in the Department of Zoology at the University of New Hampshire, where he has held the positions of director and research scientist at the university's Jackson Estuarine Laboratory. Alongside his administrative duties, he conducts research programs in molluscan shellfish restoration and aquaculture in near shore and open ocean environments and in estuarine and marine water quality monitoring. Prior to his tenure at the university, he was a commercial fisherman and the owner and operator of seafood and shellfish aquaculture businesses. He received his Ph.D. from UNH.